

UNIVERSITY - NATIONAL OCEANOGRAPHIC LABORATORY SYSTEM

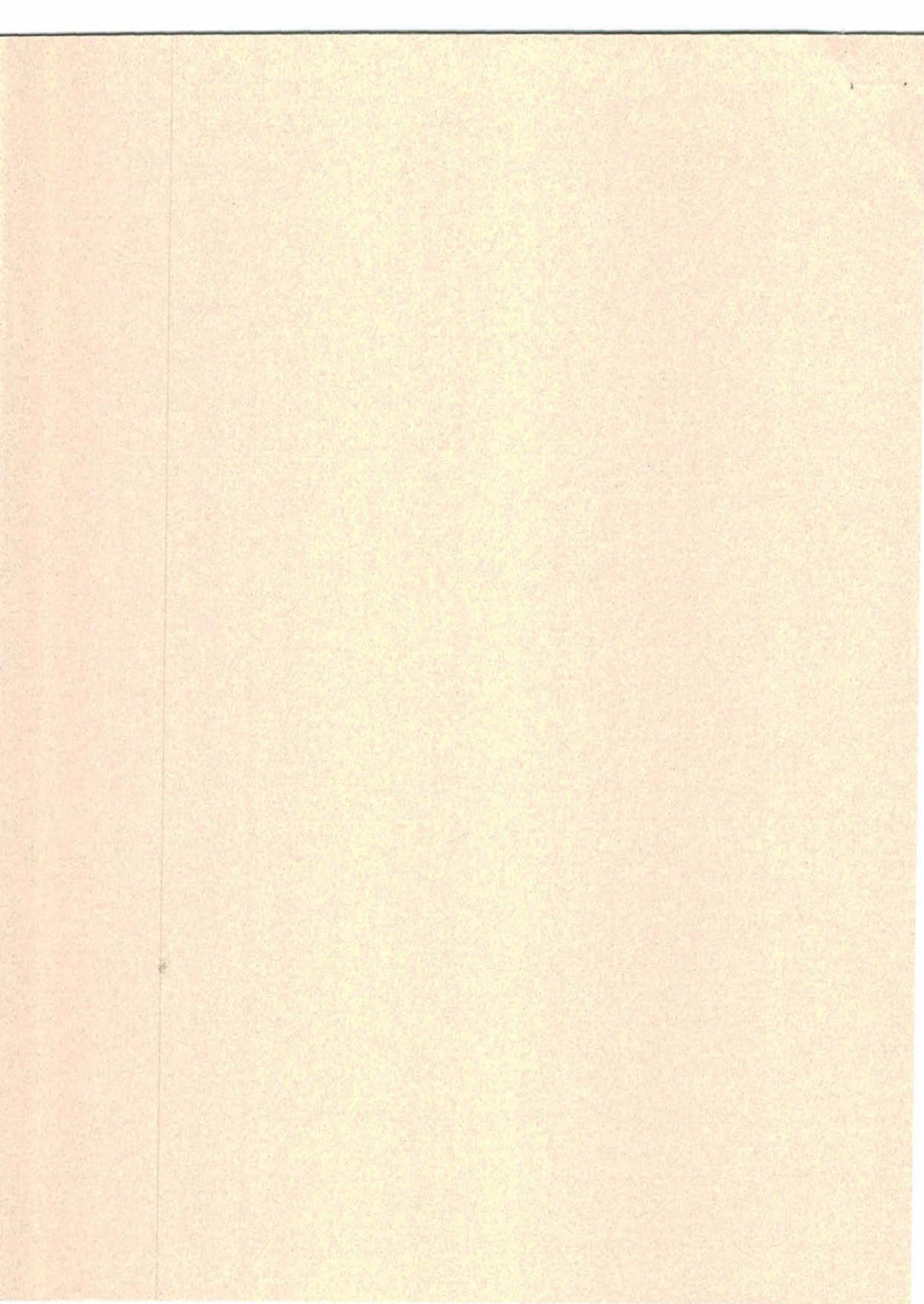
SHIP SCHEDULING REVIEW

Report of Meeting

17 June 1997

**National Science Foundation
4201 Wilson Boulevard, Room 730
Arlington, VA 22230**





UNOLS SHIP SCHEDULING REVIEW MEETING
National Science Foundation
4201 Wilson Boulevard, Board Room 730
Arlington, VA 22230

17 June 1997

Appendices

- I. Meeting Announcement
- II. Ship Scheduling Review Meeting Attendance List
- III. Ship Cost Summary 1997 & 1998
- IV. 1998 Proposed Cruise Tracks

Introduction:

The Ship Schedule Review Group met on 17 June in Room 730 of the National Science Foundation as per the Chair's announcement, *Appendix I*. Those present were Don Moller, Chair; Robert Hinton, Vice Chair; Dolly Dieter, NSF; Sujata Millick, ONR; Scott McKellar, NOAA; Elizabeth White, NOAA; Gordon Wilkes, NAVO; and Jack Bash, UNOLS. Others attending are included on the attendance list, *Appendix II*.

The meeting was called to order at 0830 by Don Moller. Don welcomed the attendees and outlined the plan for addressing scheduling issues. A brief discussion was held on two outstanding problems remaining in the 1997 scheduling year. These were the THOMPSON gear failure with its impact on scheduling and the overlapping schedules of ATLANTIS/ALVIN and EWING causing an operational proximity problem. These would be further addressed at a later time.

Each ship's proposed schedule was reviewed. The cost summaries for 1998 as originally submitted are included in *Appendix III* along with the 1997 costs. *Appendix IV* includes the ship tracks submitted by the schedulers reflecting the schedules presented. Comments and recommendations of this review follows in the order addressed.

BARNES - University of Washington - The Strom and Banse cruises have been declined. The Deming work remains pending. The cruise of Simenstad to Astoria in February will need reevaluation. If WECOMA can do this work it should be moved to that ship. This will remove the necessity for two ships and significantly reduce transit and weather days. An ONR funded cruise of 15 days for Curtis Davis should be added to the BARNES schedule.

BLUE FIN - Skidaway - The funding for Nelson has been declined otherwise the schedule looks fine as presented.

CALANUS - University of Miami - Funding for the Milne cruise has been declined. CALANUS schedule looks very full if all the NOAA work materializes.

LAURENTIAN - University of Michigan - The Jude work has been declined. The Green and Eadie CoOp work has been funded.

SEA DIVER - HBOI- All NSF proposed cruises for SEA DIVER have been declined. The ONR Ackleson work has been funded. The Ship Scheduling Review Group is concerned with the potential day rate increase.

URRACA - STRI - Both NSF cruises, Glynn and Kidwell, have been funded.

ALPHA HELIX - University of Alaska - The NSF cruise of Button has been declined; Kvitek has been funded by NSF. The funding for the Weingartner/GLOBEC work is 100% NOAA funding. The OPP work remains pending since the panel has yet to meet.

POINT SUR - Moss Landing Marine Laboratory - The scheduled portion of POINT SUR's schedule looks fine with the exception of Welshmeyer and Worcester. These cruises should be moved to a larger ship (MOANA WAVE or NEW HORIZON) to decrease the likelihood of weather related delays. A review should be made of those cruises coordinated with Scripps to determine if a better balance of schedules is possible.

SPROUL - Scripps - The cruises of Felbeck and Dorman have been declined. If WECOMA can do the Simenstad work it should be moved to that ship. This will remove the necessity for two ships and significantly reduce transit and weather days. The Bernhard work (OCE 9711812) has been funded for two three day cruises. An ONR funded cruise of six days for Hodgkiss of MPL should be added. This will need to be coordinated with the schedule of FLIP.

LONGHORN - University of Texas - The cruises of Villareal, Gardner, Ingall, Holt and Benner have been declined. NOAA is funding the Walsh work and is scheduled on SUNCOASTER not LONGHORN.

PELICAN - LUMCON - The NSF cruises of Nelson, Mallison, Houde, Shiller, Paul and Schofield have been declined. Cruises by Goni (ONR) four days and Ornter (NOAA) 30 days should be added, however funding remains pending. The NAVO work double booked with GYRE should remain on PELICAN for cost effectiveness.

GYRE - TAMU - The NSF cruise of Goff has been declined. The NAVO work should be done aboard PELICAN to take advantage of the lower day rate on this ship.

EDWIN LINK - HBOI - Cook's REU work has been funded. The NSF Frank work has been declined. The funding for the Bernhard work remains pending.

CAPE HATTERAS - Duke/UNC - The work of Moore, Collins and Mountain has been funded, Nelson and Paul have been declined. The Anderson work has been funded with a 50/50 split NSF/NOAA (this could change if EPA enters into the program). The Keigwin work needs to go earlier than his work planned for ENDEAVOR/OCEANUS. This schedule has 264 days as written. An evaluation of the schedule is necessary to reduce the transit days and possibly transfer 30-40 days to OCEANUS/ENDEAVOR for better overall efficiency and relieve pressure on the technical personnel.

CAPE HENLOPEN - University of Delaware - The cruises of Bardege, Pelskain, Coats and Kirchman have been declined, Sharpe remains funded (last year of a three year program). A ten day Badiy ONR cruise should be added. In addition, NOAA will likely add five to 15 days of ship time for R. Cowan of SUNY subject to funding availability.

WEATHERBIRD - BBSR - The BATS ship support level of funding is still under discussion by NSF. It is unclear whether or not the Dickey work has been included in the BATS program.

WECOMA - Oregon State University - Smith has been funded by NOAA, however, some revision of this work is expected. The Cowles work is jointly funded by NSF and ONR. The cruises of Huyer and Nittrouer are funded while the cruises of Moun and Klinkhammer remain pending. The NOAA (ECOHAB) work of Banse has been declined. An ODP program of ten days by Zumerge should be investigated as possible WECOMA work which should keep transit to a minimum. The Simenstad work on SPROUL and BARNES may be appropriate for WECOMA to decrease the transit and weather time presently scheduled. The NAVO work of two 12 day cruises should be coordinated with THOMPSON.

NEW HORIZON - Scripps - The work of Bernhard and Webb/Evan remains pending. Both NEW HORIZON and MOANA WAVE should look at the Welschmeyer and Worcester work currently scheduled on POINT SUR to determine the most efficient way to handle these cruises.

MOANA WAVE - University of Hawaii - The Berelson work (listed as Hammond) has been declined. Capone has been funded and is double booked on REVELLE. Recent communication with the Program Manager indicates the scope of the work has increased requiring a larger ship and therefore scheduled for REVELLE. The Measures and Dushaw cruises remain pending. The NAVO work is double booked with EWING. Because of the heavy TOSS equipment and the need for this work to go in early 1998, it should be booked on EWING. Note: the comment above concerning the Welschmeyer and Worcester work currently scheduled on POINT SUR.

ENDEAVOR - University of Rhode Island and **OCEANUS** - WHOI - Both ENDEAVOR and OCEANUS have duplicate schedules. One of these ships should lay-up in 1998 unless additional work materializes which is unlikely. The determination of which ship lays up must be deliberated later. The cruises of Holbrook and Zafiriou have been

declined. Four additional days for Brown have been funded. Both Shen and Wolfe on the "to be scheduled" list have been declined. The ONR work of Greene (Cornell) listed on the POINT SUR schedule has been moved to the East Coast and should go aboard OCEANUS/ENDEAVOR. The Anderson work in the Gulf of Maine is jointly funded by NOAA/NSF. Note the comment in the remarks of CAPE HATTERAS. If efficiency can be shown, one or more cruises should be transferred from CAPE HATTERAS to OCEANUS/ENDEAVOR.

SEWARD JOHNSON - HBOI - The Barringer work of NOAA will be done on BROWN. The work of Johns has been declined. The cruise of Pawlick has been funded. Both Schmitt and Richardson remain pending. A seven day Yamomota (ONR) cruise should be investigated and possibly added to SEWARD JOHNSON. Weigt should consider use of local small vessels or coordinate this cruise with the Martin/Jahnke cruise scheduled aboard KNORR. HBOI should consider moving work from LINK to give SEWARD JOHNSON the best possible day rate.

BROWN - NOAA - BROWN will only do NOAA work in 1998. The ship will transit from doing vents work at Juan de Fuca in late 1997 to the east coast for the ACCE 24N section in the Atlantic. This will be followed by the PSA. After completing a maintenance period the ship will do OACES work in the Azores. BROWN will then again return to the Pacific and more PACS work. Upon completion of PACS the ship will do TAO work at 110°W and 95°W then the Weller recovery cruise. The Weller servicing work in early 1998 must be scheduled aboard a UNOLS vessel, probably MELVILLE.

KNORR - WHOI - The two NOAA cruises (Baringer and Wanninhof) will go to BROWN. The Johns cruise has been declined. The Silva work should be scheduled later to reduce transit time. NAVO's AUTEK Range survey of ten days should be added to KNORR's schedule. A 25 day ONR cruise of Jacobs (LDEO) should also be added. Note comment above concerning Weigt. If a local vessel is not used this work should be coordinated with the Marten/Jahnke cruise on KNORR.

The four remaining large ships are all working in the Pacific and must be considered as a group. The total large ship funded programs suggest only three ships should operate with one ship laying up.

Declines on the large Pacific ships include the following EWING - McMarty, G. Moore (ODP), Dunbar, Hammon, Barth and Johns. Blackman is a pending ALVIN cruise in the Atlantic. MELVILLE - Levin, Christie, McMurtry, Webb and Goldfinger. Chave remains pending. REVELLE - Lonsdale, Yayanos, Mattei, Hammond, Hildebrand and Reimers; Chave and Gordon remain pending. See comment above about Blackman. THOMPSON - McDuff, Rittschof and Reimers; Chaves remains pending.

Many cruises have been double booked. NAVO has indicated that their gravity work in the Gulf of Alaska is their top priority which includes two 90 day legs. These can be done on two separate ships and, if convenient, broken into two segments.

Because of the above, efficiency dictates a re-alignment of cruises with one ship laying up. The following is a possible scenario to make the most efficient use of the fleet.

<u>SHIP</u>	<u>CRUISES</u>
<u>EWING</u>	T. Moore, G. Moore (MGG), Karsten, NAVO TOSS, Gee and Bangs. Bond could be moved to KNORR if this reduces transit and is more cost effective.
<u>REVELLE</u>	JGOFS, Capone (1), NAVO (gravity), Capone (2) and Smith. If approved, Gordon. (If possible the two Capone cruises should be done with one trip south to conserve transit time.)
<u>THOMPSON</u>	Stephen, State, Fisher, Worcester, Stephen, Sternberg, State, Chave, NAVO (gravity) and NAVO (PhyO coordinated with WECOMA).
<u>MELVILLE</u>	Weller (servicing of moorings) then lay up.
<u>ATLANTIS</u>	No firm recommendations were made to the ATLANTIS schedule. The 1997 decision on the gear switch with THOMPSON could impact the 1998 schedule. Should ATLANTIS consider not going to Juan de Fuca in 1998 to allow more southern EPR time?

The coordination of the ROVs will be important as the schedules are worked up for the large ships.

APPENDIX I

5/30/97

1998 Scheduling Review Meeting
Tuesday 0830, 17 June, 1997
NSF-Arlington, VA Room #730

Hello Schedulers:

The first of the two annual scheduling meetings will be held at NSF on 17 June. As was the case last year, this will be a review meeting which will be attended by the Ship Scheduling Committee Chair (Moller) and the co-Chair (Hinton), the UNOLS Chairman (Ken Johnson), the UNOLS Executive Secretary (Jack Bash), and representatives from the funding agencies (NSF, NOAA, ONR, NAVO plus interested Science Program Managers).

The results of the NSF May panel review should be available, at least in a preliminary form. These will provide a realistic idea of the number of science programs, their geographic location and the number of days we need to support in 1998. Schedules will be reviewed with the aim of assuring the overall science requirements are met consistent with the most cost effective operation of the fleet. A preliminary report of the meeting and its recommendations will be provided by email.

It is time to get our proposed/tentative 1998 schedules published and into the system so they are available for review and discussion. The agencies feel it is important that "best shot" preliminary schedules be provided by JUNE 10. Please email the schedules to "unols@gso.uri.edu". The UNOLS Office is prepared to post them on the OCEANIC BBS as soon as received. Multiple schedule options are discouraged. Jack Bash will post only one on OCEANIC.

Other information is also required. We request the following be provided to the UNOLS Office:

- 1) All 831 ship time requests you hold should be included in the central inventory kept by the UNOLS office. If you already haven't done so, please forward all requests to the UNOLS Office so that there is a single complete file for all 1998 programs.
- 2) Proposed 1998 cruise tracks for all the large vessels and vessels NOT operating in their local regions should be FAXed to the UNOLS Office. - - - The new UNOLS Office FAX # is: (401) 874-6167. - - -
- 3) Update your 1997 schedules and post them to the UNOLS Office.

Either Robert or I will attempt to talk to each of you before the June 17 meeting.

The UNOLS community has again been approached by NAVOCEANO and NOAA to schedule programs aboard the academic R/Vs that their own fleets are unable to accommodate. The introduction of these requests into the UNOLS system has been formalized by the Federal agencies and, hopefully, will continue in the future. Both agencies have posted electronic ship time request forms for the programs. Please give these potential cruises consideration.

It should be noted that NOAA's RON BROWN (AGOR-26) will be beginning its first full year of operation in 1998. Of significant importance to the schedulers is the intention to schedule RON BROWN within the UNOLS scheduling process.

APPENDIX II

Attendees - June 17, 1997

<u>NAME</u>	<u>ORGANIZATION</u>	<u>EMAIL</u>
John Bash	UNOLS	unols@gso.uri.edu
Patrick Dennis	ONR/096	dennisp@onr.navy.mil
Dolly Dieter	NSF	edieter@nsf.gov
David Epp	NSF/MGG	depp@nsf.gov
Robert Hinton	U of Washington	hinton@ocean.washington.edu
Ken Johnson	MLML	johnson@mlml.calstate.edu
Bruce Malfait	NSF/Ocean Drilling	bmalfait@nsf.gov
Dave McCarren	NAVO	dmccarren@wpo.navy.mil
Scott McKellar	NOAA	Scott.McKellar@noaa.gov
Sujata Millick	ONR	millics@onr.navy.mil
Don Moller	WHOI	dmoller@whoi.edu
Alexander Shor	NSF	ashor@nsf.gov
Andrew Silver	ONR	silvera@onr.navy.mil
CDR Jim Trees	NAVO	jtrees@navo.navy.mil
Richard West	NSF	rwest@nsf.gov
Beth White	NOAA	Elizabeth.White@noaa.gov
Gordon Wilkes	NAVO	gwilkes@navo.navy.mil
Marsh Youngbluth	NSF	myoungbl@nsf.gov

APPENDIX III

SUMMARY OF SHIP USE AND COSTS									
YEAR: 1998									
As of: 6/16/97									
SHIP/CLASS	DAY	NSF \$	DAY	NAVY \$	DAY	OTHER \$	DAY	TOTAL \$	DAILY RATE
R. REVELLE	318	5,330	0	0	0	0	318	5,330	16,760
MELVILLE	185	3,275	120	2,124	2	35	307	5,434	17,700
KNORR	177	3,009	46	782	103	1,751	326	5,542	17,000
ATLANTIS	257	4,497	0	0	43	752	300	5,249	17,497
EWING	311	4,914	49	774	0	0	360	5,688	15,800
T.G. THOMPSON	172	2,763	16	257	97	1,558	285	4,578	16,063
MOANA WAVE	206	2,121	28	288	65	670	299	3,079	10,298
CLASS I/II	1,626	25,909	259	4,225	310	4,766	2,195	34,900	--
AVE: (7)	232	3,701	37	604	44	681	314	4,986	--
EDWIN LINK	64	576	0	0.0	122	1,098.0	186	1,674	9,000
ENDEAVOR	178	1,981	30	334	14	156	222	2,471	11,131
OCEANUS	210	2,478	30	354	14	165	254	2,997	11,799
GYRE	42	302	30	216	8	58	80	576	7,200
NEW HORIZON	96	922	1	10	83	797	180	1,728	9,600
SEWARD JOHNSON	213	2,066	21	204	45	437	279	2,707	9,701
WECOMA	60	628	44	461	131	1,371	235	2,460	10,468
CLASS III	863	8,953	156	1,579	417	4,081	1,436	14,613	--
AVE: (8)	108	1,119	20	197	52	510	180	1,827	--
PELICAN	145	580	40	160	70	280	255	1,020	4,000
LONGHORN	197	788	0	0	34	136	231	924	4,000
POINT SUR (a)	115	690	71	426	36	216	222	1,332	6,000
CAPE HATTERAS	170	1,104	58	376	57	370	285	1,850	6,491
ALPHA HELIX	165	1,609	0	0	13	126	178	1,736	9,750
R. SPROUL	86	516	23	138	17	102	126	756	8,000
CAPE HENLOPEN	191	860	62	279	1	5	254	1,143	4,500
WEATHERBIRD II	154	1,155	0	0	0	0	154	1,155	7,500
SEA DIVER	76	361	22	105	0	0	98	466	4,750
CLASS IV - TOTAL	1,299	7,663	276	1,484	228	1,235	1,803	10,381	--
AVE: (9)	144	851	31	165	25	137	200	1,153	--
BLUE FIN (b)	100	182	0	0	46	83	146	265	1,816
LAURENTIAN							0	0	0
BARNES	96	140	26	38	0	0	122	178	1,459
CALANUS	90		0		134		224	0.0	0
URRACA (c)	49		0		124		173	0	NA
< CLASS IV TOTAL	335	322	26	38	304	83	665	443	--
AVE: (5)	67	64	5	8	61	17	133	89	--
Fleet Total	4,123	42,846	717	7,325	1,259	10,165	6,099	60,336	--
AVE: (29)	142	1,477	25	253	43	351	210	2,081	--

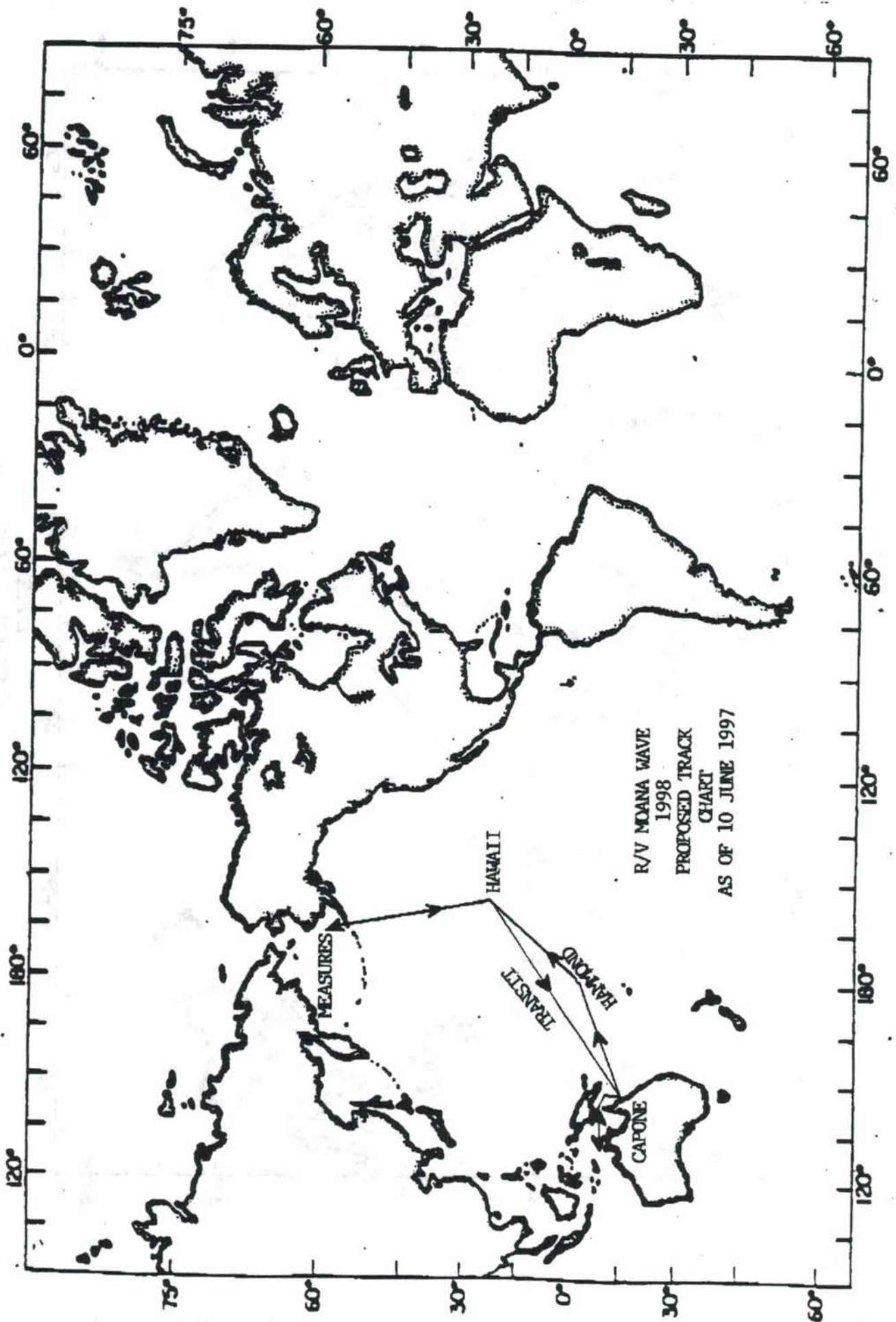
SUMMARY OF SHIP USE AND COSTS

YEAR: 1997

as of 6/16/97

SHIP/CLASS	NSF		NAVY		OTHER		TOTAL	DAILY	
	DAY	\$	DAY	\$	DAY	\$			
R. REVELLE *	232	3,703	9	144	48	766	289	4,613	15,962
MELVILLE *	192	3,241	75	1,266	21	354	288	4,861	16,878
KNORR *	153	2,509	112	1,837	28	459	293	4,805	16,200
ATLANTIS *	126	2,161	2	34	10	172	138	2,367	17,152
EWING *	218	3,541	60	975	0	0	278	4,516	16,245
T.G. THOMPSON *	171	2,624	24	368	66	1,013	261	4,005	15,345
MOANA WAVE *	176	2,290	0	0	19	247	195	2,537	13,010
CLASS I/II	1,268	20,069	282	4,624	192	3,011	1,742	27,704	--
AVE: (7)	181	2,867	40	661	27	430	249	3,958	--
EDWIN LINK *	43	366	34	289.0	135	1,148.0	212	1,803	8,502
ENDEAVOR *	117	1,260	74	797	0	0	191	2,057	10,770
OCEANUS *	156	1,724	49	541	0	0	205	2,265	10,600
GYRE *	30	216	32	230	86	619	148	1,066	7,200
NEW HORIZON *	146	1,336	70	641	55	503	271	2,480	9,151
SEWARD JOHNSON *	179	1,683	0	0	105	987	284	2,670	9,401
WECOMA *	107	1,195	12	134	71	793	190	2,122	11,850
CLASS III	778	7,780	271	2,632	452	4,050	1,501	14,462	--
AVE: (8)	97	972	34	329	57	506	188	1,808	--
PELICAN *	59	213	52	203	97	351	208	767	3,688
LONGHORN *	4	16	0	0	41	164	45	180	4,000
POINT SUR *	82	508	57	353	58	360	197	1,221	6,198
CAPE HATTERAS *	120	825	98	674	19	131	237	1,630	6,878
ALPHA HELIX *	113	762	0	0	36	357	149	1,119	7,512
R. SPROUL *	139	792	21	120	44	251	204	1,163	5,701
CAPE HENLOPEN *	88	502	87	496	4	23	179	1,021	5,704
WEATHERBIRD II *	130	964	20	148	1	7	151	1,120	7,415
SEA DIVER *	5	23	39	176	45	203	89	402	4,517
CLASS IV - TOTAL	740	4,605	374	2,170	345	1,847	1,459	8,623	--
AVE: (9)	82	512	42	241	38	205	162	958	--
BLUE FIN *	92	206	0	0	13	29	105	235	1,816
LAURENTIAN	67	302	0	0	10	45	77	347	4,500
BARNES *	106	146	0	0	28	39	134	185	1,381
CALANUS	66	218	12	40	24	79	102	336.6	3,300
URRACA	0	0	0	0	0	0	0	0	NA
< CLASS IV TOTAL	331	871	12	40	75	192	418	1,103	--
AVE: (5)	66	174	2	8	15	38	84	221	--
Fleet Total	3,117	33,325	939	9,466	1,064	9,101	5,120	51,892	--
AVE: (29)	107	1,149	32	326	37	314	177	1,789	--

APPENDIX IV



R/V MOANA WAVE
 1998
 PROPOSED TRACK
 CHART
 AS OF 10 JUNE 1997

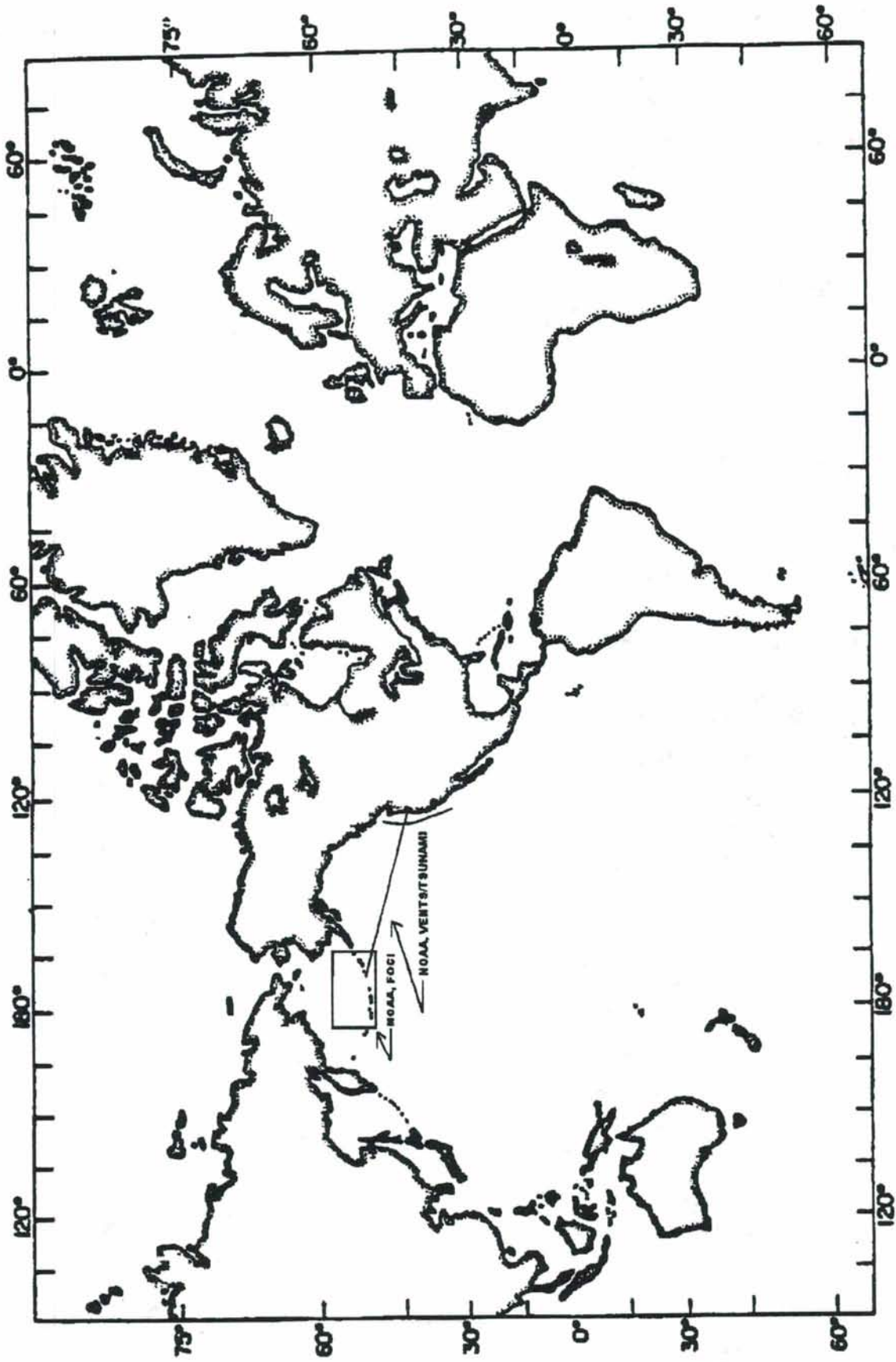
HAWAII

TRANSIT

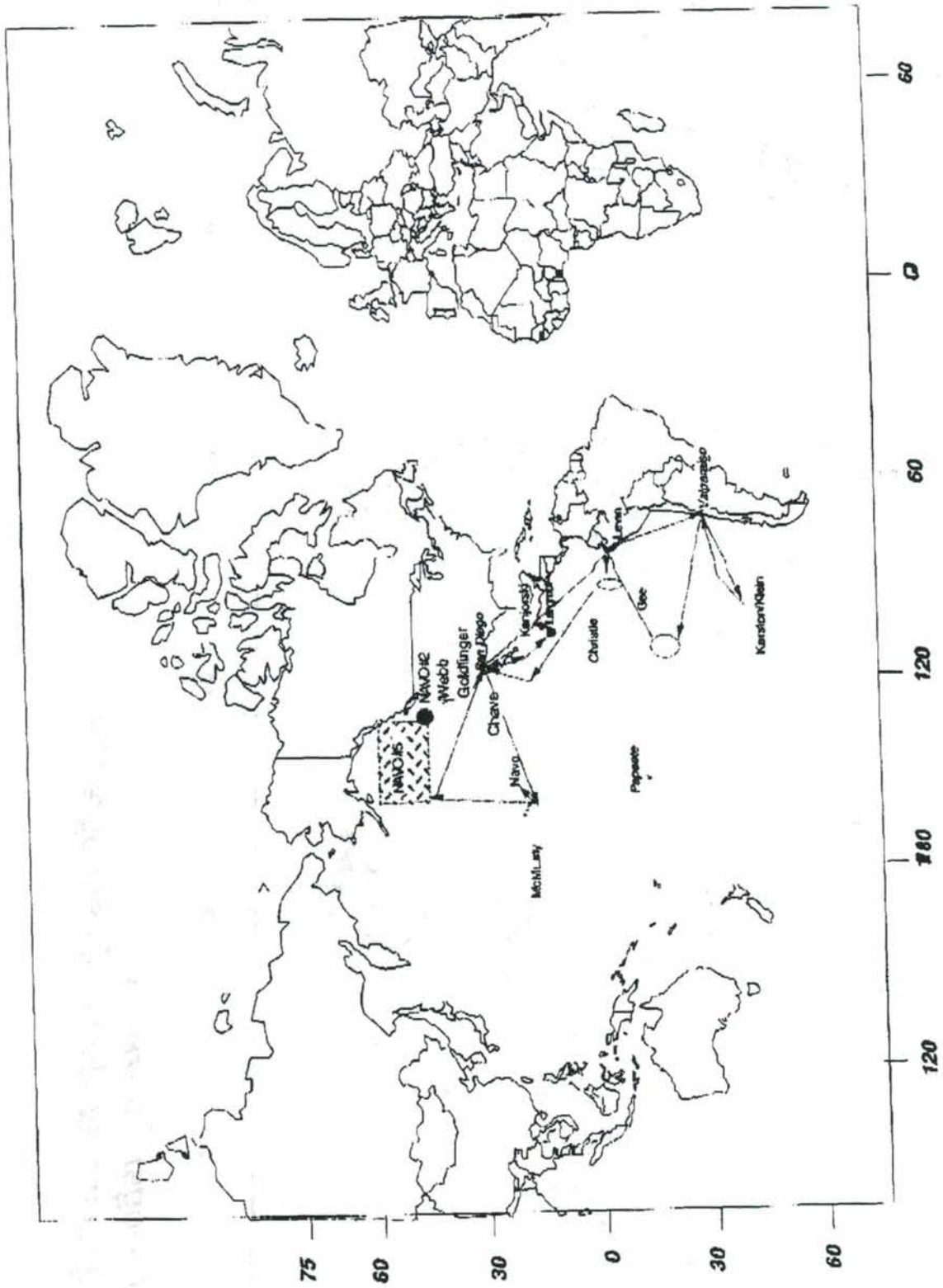
HAMMOND

CAPONE

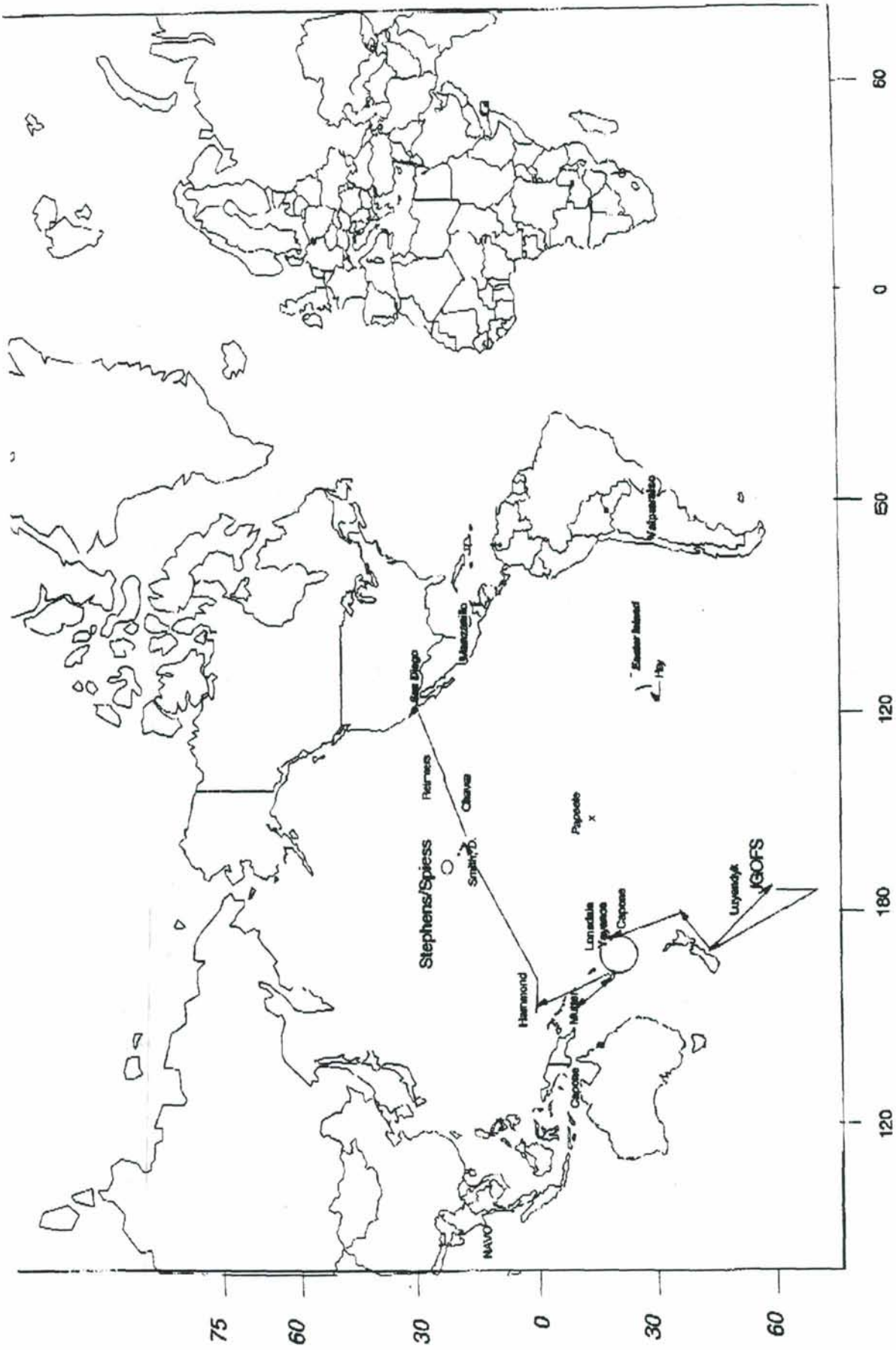
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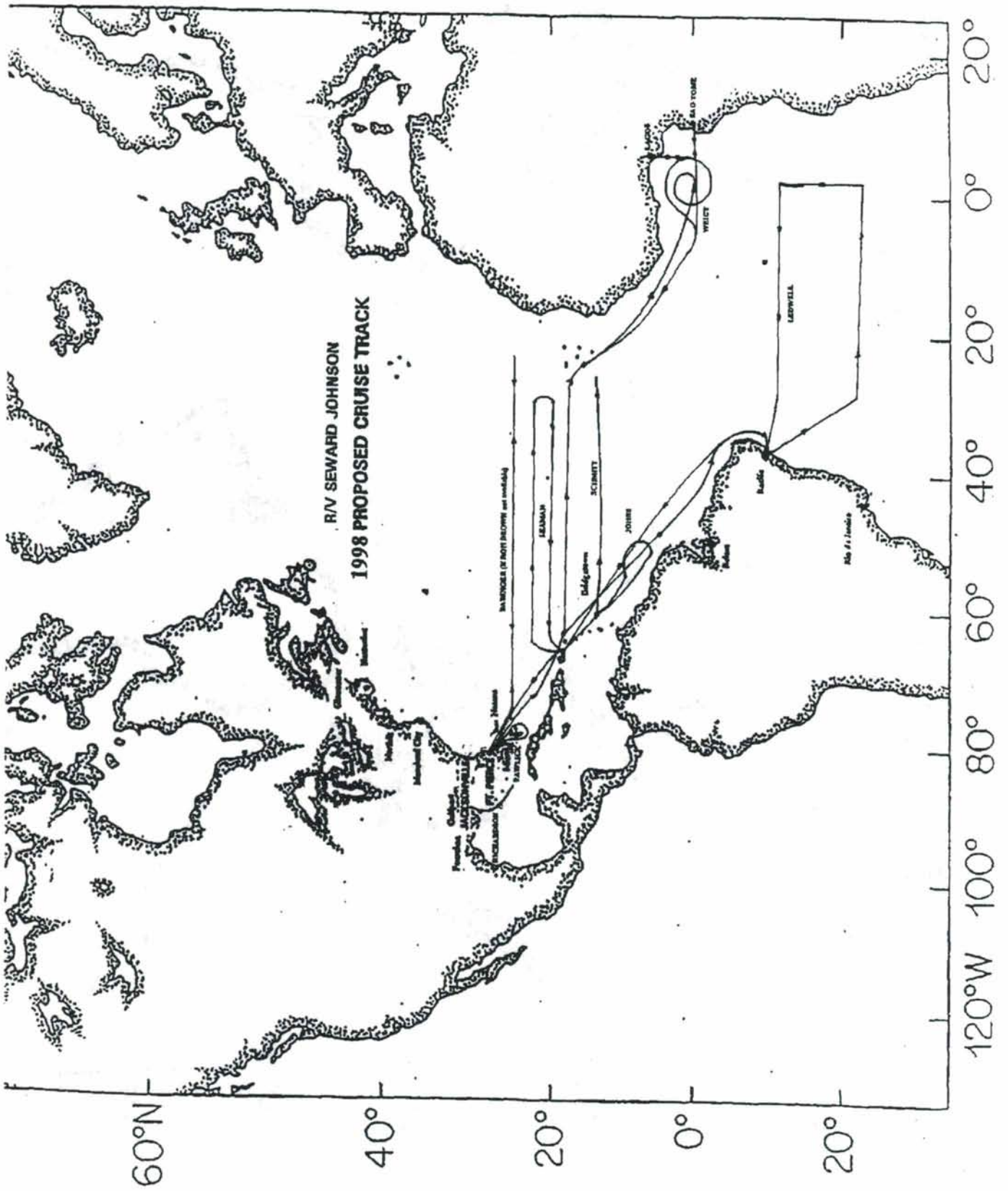
1998
CRUISE TRACKS
R/V WECOMA
OREGON STATE UNIVERSITY

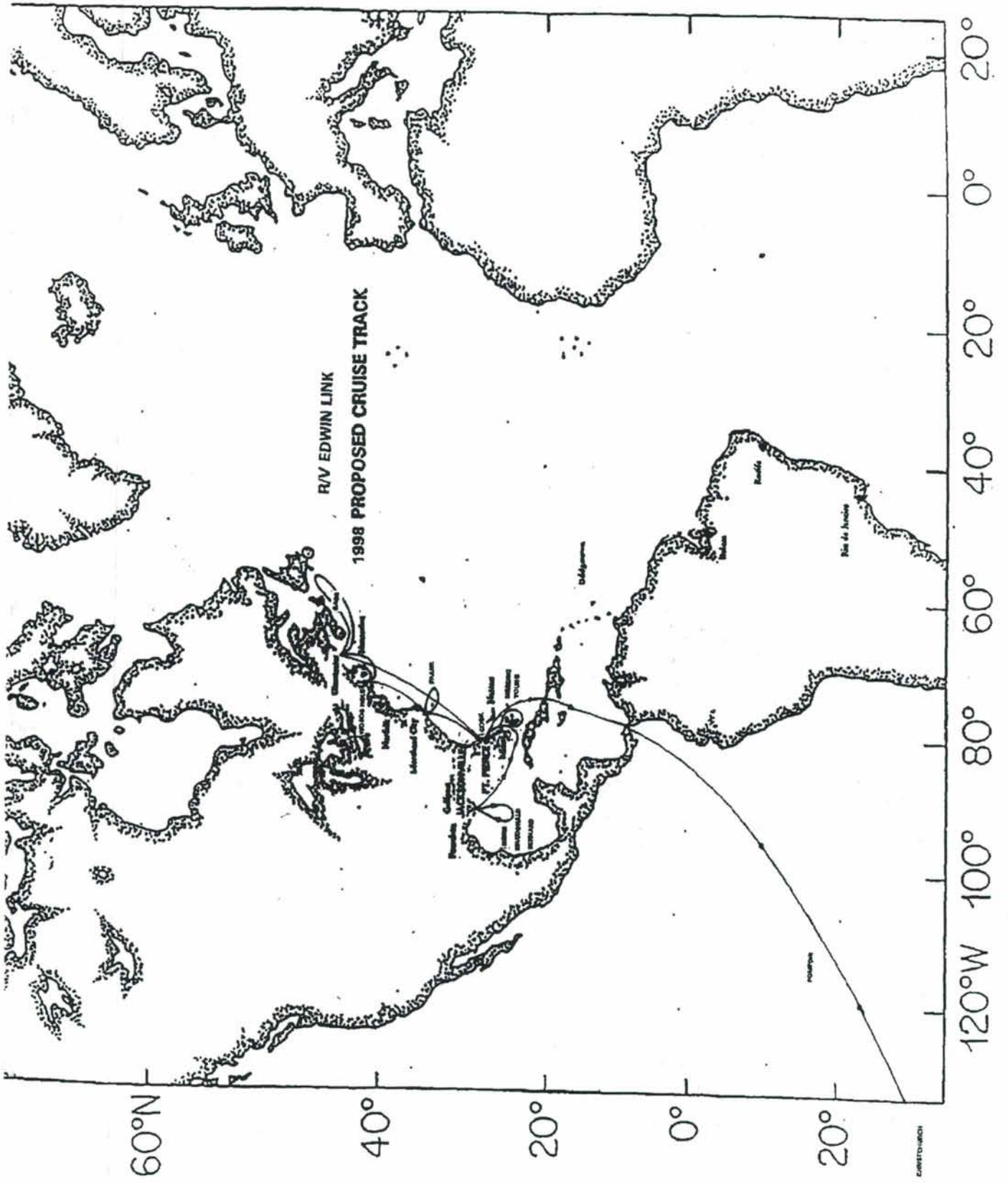


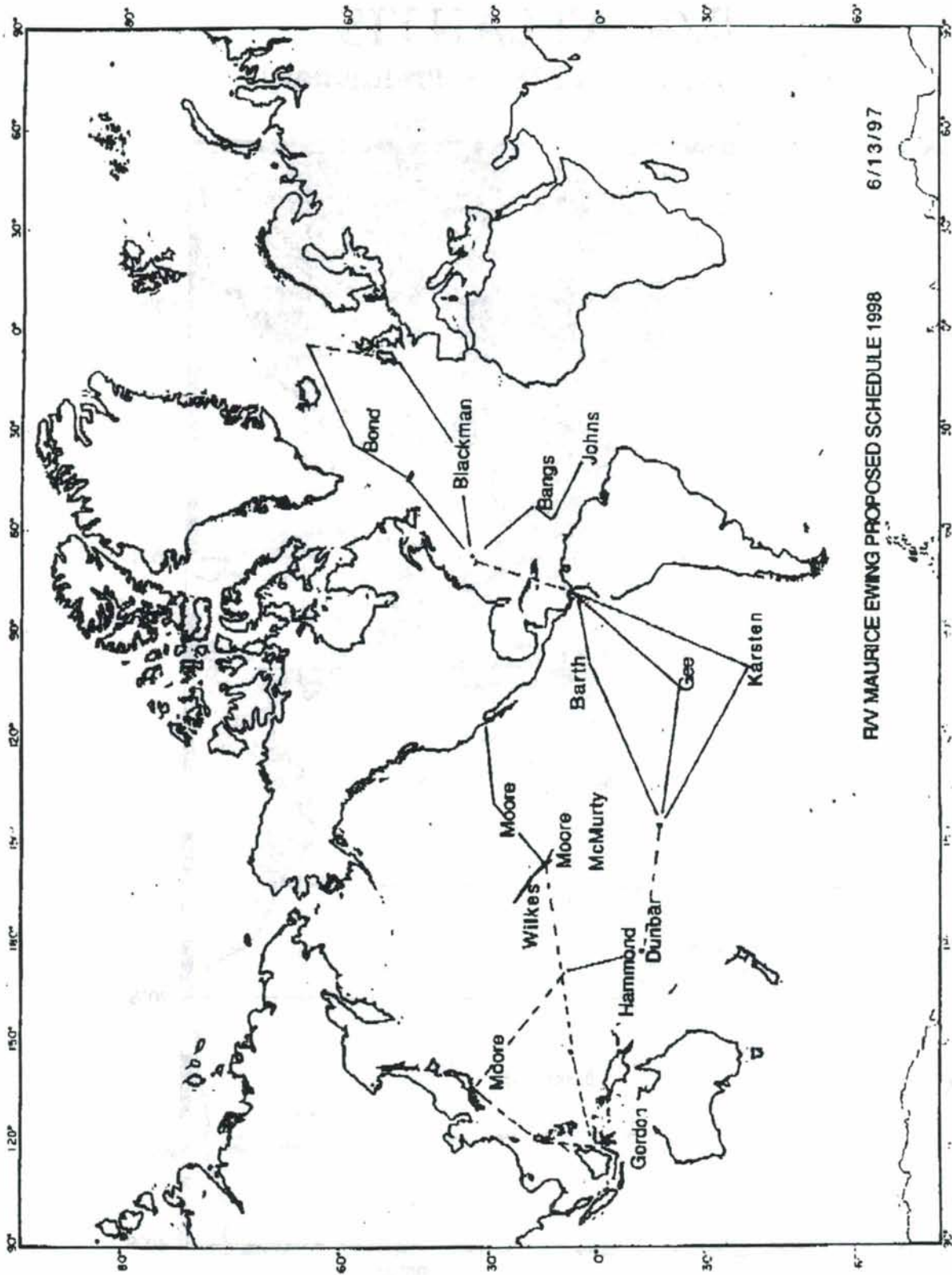
Scripps Institution of Oceanography
RAV Melville 98



R/V Roger Revelle 98
Scripps Institution of Oceanography

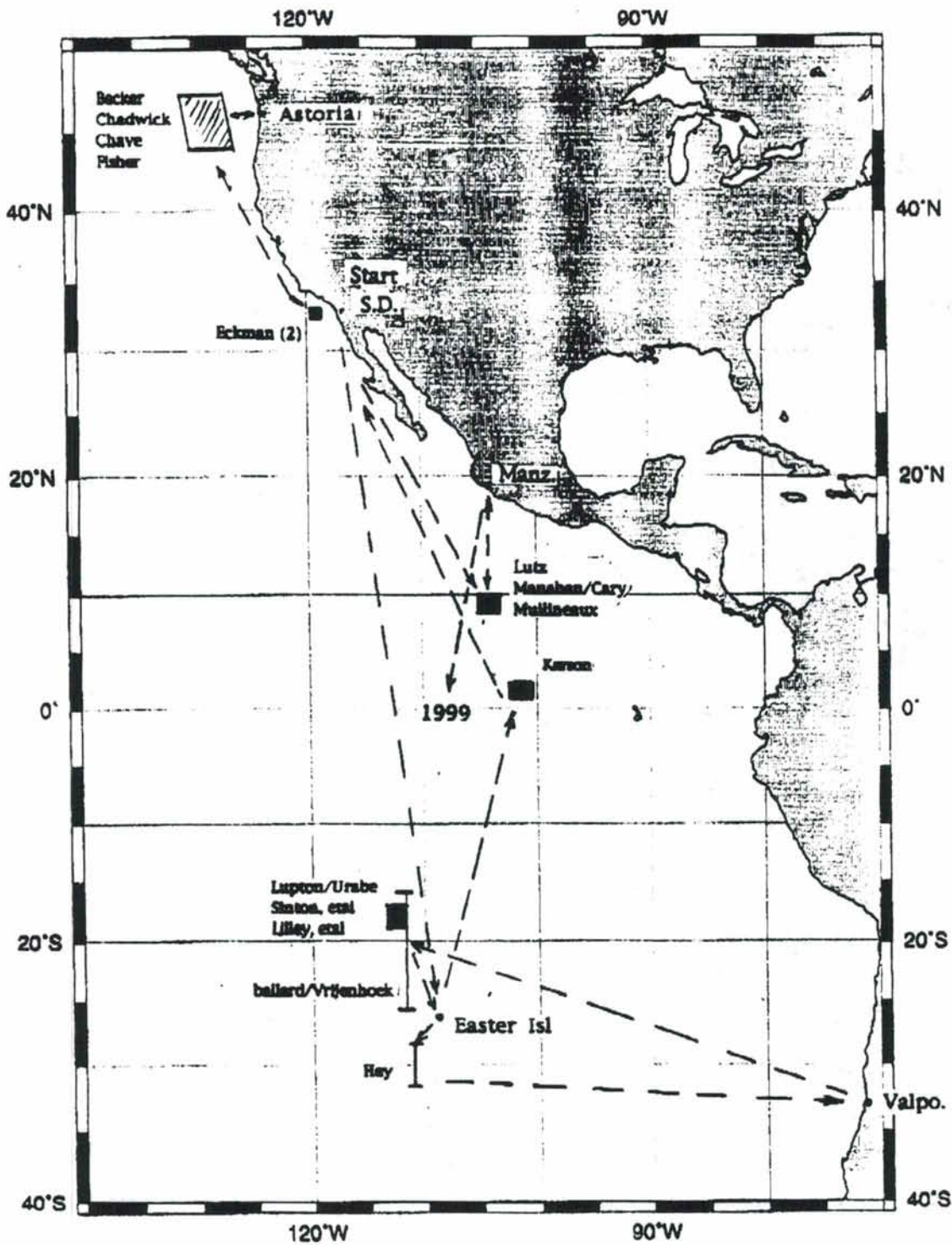


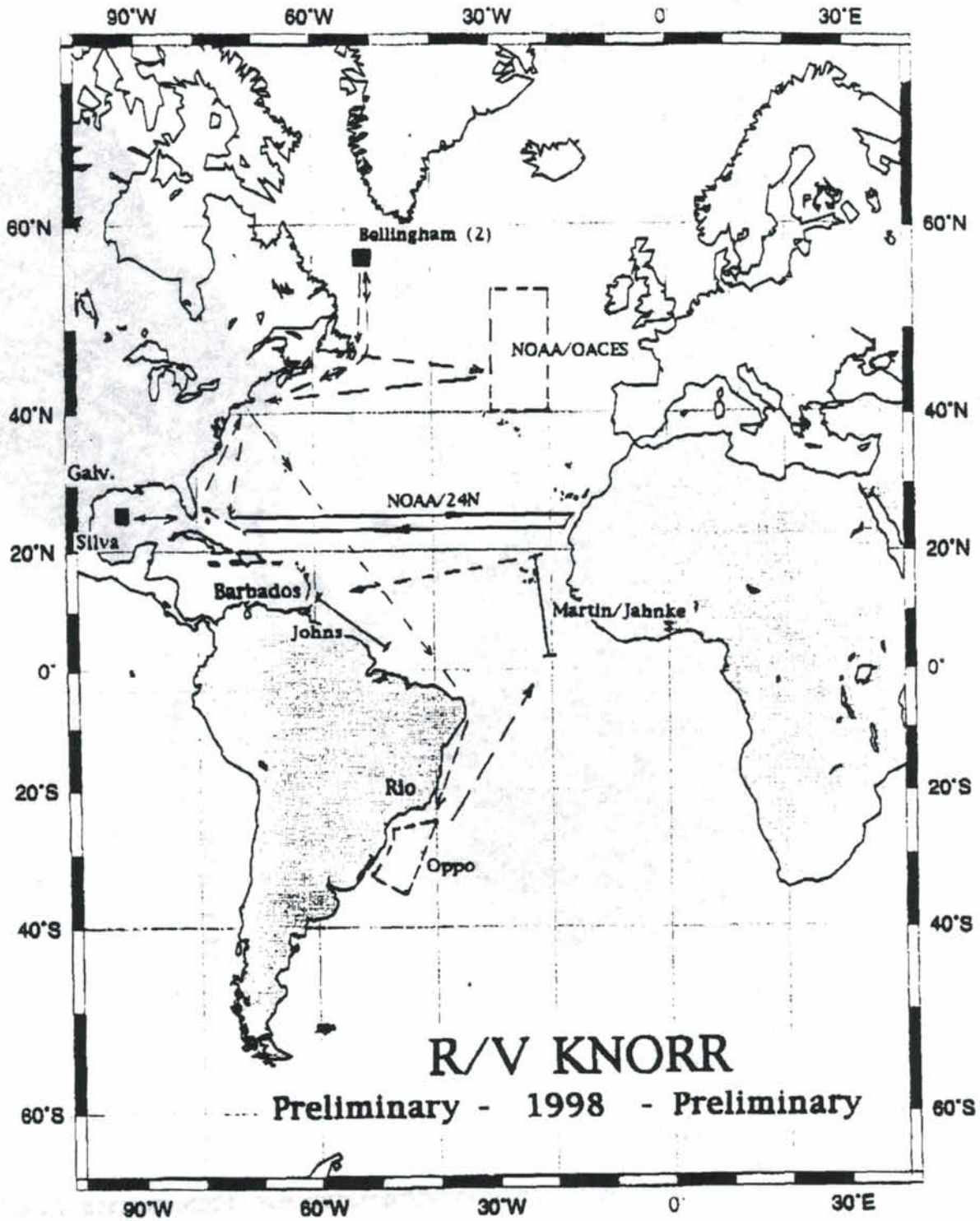




R/V ATLANTIS

Preliminary - 1998 - Preliminary





NOAA Ship RON BROWN

FY98 Sailing Plan

